APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/769,510	01/30/2004	Michael Eneboe	01-490/1C	8371

24319   7590   11/07/2006

LSI LOGIC CORPORATION
1621 BARBER LANE
MS: D-106
MILPITAS, CA 95035

EXAMINER
SIEK, VUTHE

ART UNIT	PAPER NUMBER
2825	

DATE MAILED: 11/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>07 August 2006</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-12 and 21* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7-12 and 21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This office action is in response to application 10/769,510 and amendment filed

on 8/7/2006. Claims 1-5, 7-12 and 21 remain pending in the application, where claims 6

and 13-20 are canceled.

Claim Objections

2.   Claims 1 and 14 are objected to because of the following informalities: the claim

limitation of "...chosen from the group of comprising..." should be changed to --

...chosen from the group consisting of ...--, in order to provide proper format (See

Markush-type claim). The objection applied to claims 4, 8, 11 and 21 for the same

reason. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.   Claim 1-5, 7-12 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated

by Miller et al. (6,539,531 B2).

5.   As to claims 1 and 10, Miller et al. teach a method for designing integrated

circuits (ICs) and their interconnect systems includes IC component cells and

interconnect component cells in a cell library. Each IC component cell provides both

physical and behavioral model of a component that may be incorporated into IC while

each interconnect component cell includes both a physical and behavioral model a

separate internal or external component of an interconnect system that may link the IC

to external nodes. Both the IC and its interconnect systems are designed by selecting

and specifying interconnections between component cells included in the cell library.

Interconnect systems are flexibly designed to act like filters tuned to optimize desired

frequency response characteristics (Fig. 11, 12, 14, 15, 17, 18, 20 and 21, at least see

summary), col. 15-18, 21). Miller et al. teach a cell library for storing interconnections

and components for designing an IC. Note that when designed interconnect systems

are flexible and can be selected from cell library and act like filters tuned to optimize

desired frequency response characteristics, the optimization is based on at least on

characteristic chosen from the group consisting of scalability or isochronous

interconnect configuration. Miller et al. teach interconnection including scalability

(scalable according to bandwidths) (at least see col. 17-18).

6.   As to claim 2, Miller et al. designed interconnect systems act like filters to

optimize desired frequency response characteristics for an IC design. The IC design is

a self-programmable IC (at least see summary).

7.   As to claim 3, Miller et al. teach synthesizing an IC having specified design (at

least see summary, col. 8).

8.   As to claims 4 and 21, Miller et al. teach both the IC and its interconnect systems

are designed by selecting and specifying interconnections between component cells

included in the cell library. Interconnect systems are flexibly designed to act like filters

tuned to optimize desired frequency response characteristics (Fig. 11, 12, 14, 15, 17, 18, 20, 21, at least see summary), col. 15-18, 21). Note that when designed interconnect systems are flexible and can be selected from cell library and act like filters tuned to optimize desired frequency response characteristics, the optimization is based on at least on characteristic chosen from the group consisting of latency, bandwidth or arrangement of components (at least see col. 17-18).

9.   As to claim 5, Miller et al. teach a direct connectivity definition, derived from the optimized data, is utilized to synthesize an IC (Fig. 11, 12, 14, 15, 17, 18, 20, 21, at least see summary, col. 15-16).

10.   As to claim 7, Miller et al. teach optimizing is performed without user intervention by an agent since the optimized interconnect systems act like filters.

11.   As to claim 8, Miller et al. teach designing various IC including macro-cells, modules, microprocessor and other complex components (col. 8 lines 36-55). Since ASIC and ASICs are known in art, the selected IC from the group consisting of ASIC and ASICs is art inherent.

12.   As to claim 9, Miller et al. teach interconnects not specified by a user are automatically configured by an agent (designer) (at least see col. 15-16, 21).

13.   As to claim 11, et al. teach designing various IC including macro-cells, modules, microprocessor and other complex components (col. 8 lines 36-55).

14.   As to claim 12, Miller et al. teach designing interconnect system for communicating data between driver and receiver. Therefore, the amount of data

transferred between a driver and a receiver over interconnection system must be known

and indicated.

Remarks

15.   Examiner believes that each of the claim limitations is taught by Miller et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Vuthe Siek whose telephone number is (571) 272-1906.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jack Chiang can be reached on (571) 272-7483. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Vuthe Siek

VUTHE SIEK
PRIMARY EXAMINER